
INDEX

CHEMICAL AND PETROLEUM ENGINEERING

Numbers 1-12, 1967



CHEMICAL AND PETROLEUM ENGINEERING

Numbers 1-12, 1967

(A translation of *Khimicheskoe i Neftyanoe Mashinostroyeniye*)

A

Abramov, M. A. -710
 Abrosimov, B. Z. -717, 723
 Adugina, N. A. -207
 Aérov, M. É. -286
 Ainshtein, V. G. -451
 Akunov, V. I. -424
 Akutin, M. S. -107
 Aleksandrov, I. A. -163
 Aleksandrov, N. A. -728
 Alifer, P. P. -59
 Aliverdizade, K. S. -691, 696
 Altukhov, S. M. -167, 619
 Andrianov, G. G. -472
 Anel'chik, D. E. -396
 Antonov, A. A. -688
 Artamonov, A. Ya. -465
 Asadullaev, A. B. -684

B

Babaev, M. A. -70
 Babaev, S. G. -235
 Baidalin, N. F. -588
 Bakhshiyev, Ts. A. -736
 Balter, S. G. -972
 Baranov, N. S. -45
 Bashirov, S. A. -61
 Bashlykov, A. A. -226
 Belen'kii, A. A. -628
 Beletskii, D. G. -554
 Belinkii, A. L. -799
 Belkind, F. I. -139
 Belynskii, V. V. -101
 Berezhnaya, K. P. -286
 Berliner, Yu. I. -953
 Berzhets, G. N. -679
 Besednyi, V. A. -477
 Bezhodarnyi, B. N. -98
 Bezrukov, A. S. -129
 Bikson, I. A. -209
 Blyakher, I. G. -111
 Bocharov, A. N. -49
 Boichenko, V. M. -508
 Bokareva, É. Z. -107

Bolgar', A. I. -562
 Borisenko, V. A. -299
 Borisoglebskii, B. N. -829
 Borisov, B. R. -421
 Bortnikov, I. I. -456
 Brekhov, K. I. -759
 Breslavets, B. R. -748
 Bronshtein, L. M. -386
 Brusilovskii, G. B. -183
 Burlakov, I. I. -812
 Burmistrova, L. K. -392
 Burtsev, K. N. -571
 Buyanov, A. N. -59
 Bystrova, T. A. -286

C

Checherin, Yu. I. -241
 Chechetkin, A. V. -289
 Chentsov, Yu. S. -231
 Chernyi, A. A. -20
 Chernyshev, V. M. -74, 266, 294
 Cheskis, A. B. -447
 Cheskis, Kh. I. -49
 Chirva, V. I. -777
 Chistyakov, E. G. -148
 Chistyakov, S. P. -764

D

Dal'nikov, R. F. -379
 Danielyan, A. A. -701, 705, 710
 Danielyan, I. A. -235
 Dan'kin, A. A. -465
 Darovskikh, A. P. -286
 Davidenko, A. N. -202
 Degtyarev, V. V. -209
 Den, G. N. -15
 Dimentov, Yu. I. -86
 Dmitrievskaya, A. D. -81
 Dmoshinskii, M. V. -571
 Dolgii, V. I. -973
 Dolinskii, V. M. -96, 253
 Domashnev, A. D. -469
 Dubinskii, M. B. -124
 Dubkov, F. Ya. -294

Dzhafarov, A. D. -710
 Dzhafarov, A. S. -963

E

Éksler, L. I. -145
 Ermakov, A. A. -74
 Evgen'ev, S. S. -263
 Ezhova, T. I. -120

F

Fedorov, V. F. -105
 Fel'dman, Ya. L. -148
 Fel'dshtein, G. L. -972
 Filippov, A. F. -344
 Filippov, A. I. -967
 Fokin, V. S. -359
 Fortunatov, N. S. -183
 Frenkel', M. I. -597, 951

G

Gal'tsov, V. Ya. -947
 Galyan, N. P. -324
 Gan, I. I. -221
 Gatiatulin, G. Kh. -368
 Gdalin, S. I. -867
 Gel'perin, N. I. -40, 279, 451, 937
 Genningson, A. V. -23
 Geokchaev, T. G. -489
 Gerasimenko, G. I. -221
 Gerke, É. G. -185
 Get'e, V. A. -628
 Ginzburg, É. N. -81
 Gleikh, A. M. -248
 Globin, N. K. -805
 Golubev, V. V. -934
 Gonibesova, I. P. -72, 240
 Gorbokonev, V. P. -934
 Gorbov, V. G. -701
 Gorelov, N. P. -29
 Gorelov, Yu. A. -934
 Goryainova, A. V. -209
 Grigor'eva, L. F. -133

Grinberg, M.A. -392
 Gruzinov, Ya.A. -179
 Gubarev, G.V. -951
 Gurevich, E.S. -652
 Gurevich, M.A. -344
 Gutarev, V.V. -943
 Guzikov, E.F. -142
 Guzman, I.S. -899
 Gyandzhuntsev, P.A. -493
 Gzovskii, S.Ya. -196, 468

I

Ibragimov, É.S. -701, 705
 Isarov, E.G. -256
 Ivakhin, S.I. -787, 791
 Izmailova, A.N. -363

K

Kabanov, N.M. -501
 Kafarov, V.V. -35, 192
 Kaganer, M.G. -918
 Kakhramanov, Kh.T. -696
 Kalinchev, E.L. -26
 Kalishevskii, V.L. -540
 Kalnin', I.M. -659
 Kantovskii, V.K. -540
 Karaev, I.K. -691
 Karasev, I.N. -196, 460
 Karavaev, A.E. -535
 Karchevskii, E.G. -439
 Kartashov, L.P. -410
 Kats, A.G. -271
 Kats, M.É. -671
 Kershenbaum, Ya.M. -98, 679
 Kharchenko, I.F. -69
 Khutinaev, A.N. -32
 Kim, V.S. -330
 Kimina, T.P. -415
 Kirpikov, V.A. -943
 Kiselev, G.F. -172, 268
 Kiseleva, N.V. -40
 Kishkis, V.K. -951
 Kokorev, D.T. -794
 Kolienko, L.P. -489
 Kolosovskii, B.V. -428
 Kondrashov, D.I. -55
 Kondrat'eva, T.F. -597, 951
 Konstantinov, V.N. -506, 867
 Korchangin, A.P. -469
 Koretskii, I.M. -867
 Korobchanskii, O.A. -770
 Koryagin, A.K. -784
 Kosoi, D.S. -406
 Kotelevskii, Yu.M. -145
 Kotlyarov, G.G. -187

Kovalenko, I.A. -632
 Kovalenko, L.M. -770
 Kovalev, E.M. -359, 442, 777
 Koval'skii, B.S. -253
 Kovshikov, E.K. -415
 Kozheurov, V.I. -918
 Kozhevnikova, E.I. -526
 Kramer, I.D. -271
 Kremenetskii, I.M. -958
 Kristal', M.M. -207, 799
 Kryuchkov, A.D. -624
 Krzhizhevskaya, N.G. -163
 Kuchinskii, M.Kh. -275
 Kukushkina, V.S. -535
 Kulakov, V.M. -435
 Kulik, V.P. -337
 Kulikov, E.A. -953
 Kumysh, I.I. -472
 Kuramzhin, A.B. -764
 Kurbanov, N.G. -705
 Kurbatskii, I.L. -637
 Kurokhtin, V.T. -226
 Kutepov, A.M. -202
 Kuznetsov, F.S. -74, 294
 Kuznetsov, Yu.P. -29
 Kuznetsov, Yu.V. -499
 Kuzyukov, A.N. -299
 Kvasha, V.B. -934

L

Landa, A.E. -892
 Lashchinskii, A.A. -431
 Lemberanskii, F.D. -710
 Leont'eva, L.A. -947
 Lesin, A.D. -156
 Levina, Zh.L. -918
 Likuchev, V.G. -6
 Litvinenko, A.M. -526
 Loganov, D.I. -764
 Loganov, D.T. -970
 Loginov, N.N. -855
 Lomakin, Yu.I. -742
 Lotkin, M.M. -61
 Lur'e, N.S. -577
 Lutsyuk-Khudin, V.A. -472
 Lyubarskii, G.É. -419
 Lyubin, Ya.L. -540

M

Magrachev, S.L. -499
 Maidel'man, N.M. -696
 Maizel', Ts.G. -72
 Makarenkov, V.A. -951
 Makarov, V.M. -805
 Makeev, S.N. -392
 Malakhova, É.K. -299

Malyshev, I.I. -413
 Malyshkin, Yu.F. -508
 Mamontov, G.V. -582
 Manilovskii, P.G. -753
 Manzon, Yu.A. -61, 493, 753
 Maragaeva, V.N. -209
 Marchenko, A.N. -780
 Markaryan, V.A. -930
 Markov, A.A. -20
 Matyash, A.Ya. -55
 Melikhov, V.N. -101
 Melikov, D.K. -705
 Melikov, M.M. -493
 Mel'nikov, E.M. -884
 Mel'nikov, S.M. -717
 Mikhalev, M.F. -456
 Mil'chenko, A.I. -456
 Miller, A.B. -231
 Minskii, Ya.M. -791
 Miroslavskaya, Yu.A. -911
 Mishchenko, M.I. -120, 304, 862
 Mishev, V.M. -937
 Mogil'chenko, V.S. -307
 Morgulis, M.L. -510
 Moskatov, K.A. -133
 Moskvina, D.V. -29
 Musatkin, S.P. -975
 Muslaev, I.M. -460

N

Nadzharov, O.É. -402
 Naikrug, E.V. -970
 Narinskii, G.B. -903
 Naumenko, I.M. -154
 Nedoborov, Yu.P. -117
 Negadailov, A.I. -748
 Nepovinnykh, V.Ya. -68
 Nesterovich, A.A. -279
 Nevryuzin, M.A. -592
 Nikitina, L.B. -406
 Nikolaev, M.N. -325
 Nikolaev, V.B. -819
 Nosov, G.A. -451
 Novopavlovskii, V.S. -374

O

Odnenko, I.V. -73
 Oganessian, L.S. -943
 Ogorodnyk, I.M. -35
 Oleinik, A.V. -873
 Onati, I.Z. -79
 Orlov, V.N. -326
 Osipov, V.V. -413

P

Palagina, V.N. -43
Parkhomenko, A.M. -304
Pavlenko, N.S. -20
Pavlov, R.V. -646
Pavlushenko, I.S. -456
Pebalk, V.L. -40, 937
Perevertailenko, Yu.A. -337
Pereverzin, N.K. -513
Perin, Yu.I. -392, 463
Perov, P.F. -585
Pertzev, L.P. -770, 777
Pinkovskii, Ya.I. -341
Planovskii, A.N. -202
Platonov, N.M. -889
Plekhev, N.M. -496
Polyakov, D.A. -142
Pomanskii, A.B. -61
Popov, G.G. -354
Prikhodchenko, P.P. -859
Prihod'ko, A.I. -328
Prokof'eva, M.V. -207

R

Rabinovich, A.M. -691
Rakhmilevich, R.Z. -923
Ramazanov, R.A. -696
Rasskazov, V.R. -40
Remesnikov, A.I. -322
Reznichenko, N.I. -213
Reznichenko, V.A. -878
Ris, V.F. -608
Rizhamadze, G.V. -105
Roginskii, G.A. -81
Roshchupkin, V.I. -688
Rozovskii, N.I. -70
Rublev, V.I. -243
Ruchinskii, V.R. -198
Rumyantsev, V.A. -603
Ryabokon', Zh.D. -32
Rysina, L.P. -226

S

Saenko, V.Ya. -472
Sagalaev, G.V. -107
Sakun, I.A. -86
Samoilov, A.V. -120
Sashina, E.K. -231
Seidov, G.N. -714
Seleznev, G.D. -421
Semenov, P.A. -117
Sergienko, D.D. -934
Serov, P.G. -410

Seryakov, V.F. -701
Shafranovskii, A.V. -198
Shakhov, F.N. -780
Shapiro, A.D. -61
Shapiro, M.B. -382, 799
Sharetskii, Yu.I. -337
Sharif'yanov, F.Sh. -505
Shaumyan, V.V. -535
Shcherbakov, V.S. -667
Shchupak, L.K. -312
Shein, T.V. -32
Sheinman, V.A. -728
Shelenkov, G.M. -477
Shemel', V.B. -517
Shevchuk, Yu.I. -691
Shevelkin, B.N. -416
Shklovskii, É.I. -231
Shkoropad, D.E. -279, 839
Shmerkovich, V.M. -723
Shnepp, V.B. -263
Shorin, S.N. -368
Shperer, V.V. -337
Shpit, I.V. -632
Shporkhun, V.I. -780
Shukhov, Yu.V. -970
Shumelishskii, M.G. -671
Shurgal'skii, É.F. -794
Shvarts, G.L. -799
Sidorkina, Yu.S. -379
Sigov, I.V. -349
Silin, E.V. -562
Sil'man, M.A. -175
Simkhovich, Z.I. -787
Simonov, A.V. -413
Sinenko, Yu.I. -547
Skalyga, L.A. -889
Slobodyanik, I.P. -198
Smirnov, G.I. -884
Smirnov, I.N. -540
Smirnov, I.P. -486
Smirnov, L.M. -889
Smirnov, V.A. -326
Smol'skii, K.V. -482
Soifer, R.D. -192
Sokolov, A.A. -463
Sokolov, V.I. -848
Sokolovskii, E.A. -152
Solodkii, A.G. -310
Sorokin, M.M. -289
Sorokin, V.I. -163
Spasski, V.V. -20, 465
Spektor, B.A. -951
Stepanov, G.A. -45
Stepanov-Grebennikov, N.M. -412
Stetsenko, V.I. -183
Stolper, M.B. -259

Stolyarov, Yu.G. -486
Sultanov, S.G. -489
Suntsov, V.N. -421
Suslyakova, V.G. -207
Sutin, R.Ya. -326
Svezhentsev, V.S. -728

T

Taganov, N.I. -456
Tarayants, V.G. -710
Tel'nov, K.A. -15
Terzyan, G.O. -826
Tikhonova, N.M. -283
Titor, V.M. -592
Tkachenko, L.Z. -748
Tolkachev, V.A. -43
Tomashnev, A.D. -52
Trebukina, M.S. -392
Trifonov, O.A. -493
Trinchuk, B.B. -396
Trunov, G.I. -934
Trusov, V.A. -399
Tsantker, K.L. -787, 791
Tumanov, Yu.V. -117
Turevskii, E.N. -163
Turut'ko, E.K. -153
Tyuftin, E.P. -43
Tyutyunik, A.P. -895
Tyutyunnikov, A.B. -780

U

Udalov, V.K. -301
Ushakov, I.S. -172, 268
Usik, V.T. -238
Ustinovich, Yu.V. -918

V

Vagner, G.I. -198
Vainshtein, G.S. -867
Vainshtein, S.M. -973
Vakhrameev, B.A. -567
Valieva, R.A. -392, 463
Vasenin, Yu.A. -271
Vasilega, A.Ya. -477
Vasil'ev, V.D. -878
Vasil'ev, V.N. -526
Velikhanov, M.N. -710
Vikhman, Yu.L. -717, 723
Vinogradov, Yu.M. -799
Virlich, É.É. -52
Visel'berg, M.B. -240
Vizel'berg, M.B. -72
Vladyko, P.I. -183

Volkonskii, V.A. -61
Volynchik, A.Z. -967
Vorob'ev, E.I. -508
Vykov, A.V. -659

Y

Yakovlev, Yu.B. -90
Yanchenko, G.V. -151

Yaroslavskii, A.M. -951
Yaroslavskii, I.M. -640
Yurchenko, A.T. -326
Yur'ev, Yu.P. -32
Yurovskaya, N.A. -111

Z

Zaikovskaya, E.P. -40
Zaitsev, A.A. -307

Zalivin, N.N. -224
Zandberg, S.A. -386, 501
Zaporozhets, O.L. -349
Zhalimbetov, S.Zh. -59
Zhivaikin, L.Ya. -111
Zhurbin, M.V. -402
Zlotnitskaya, L.V. -382
Zorin, A.S. -506
Zusmanovskaya, S.I. -923

TABLE OF CONTENTS

CHEMICAL AND PETROLEUM ENGINEERING

Numbers 1-12, 1967

(A translation of *Khimicheskoe i Neftyanoe Mashinostroenie*)

CONTENTS

Number 1

January, 1967

	Engl./Russ.
Second Year of the Five Year Plan	1 1
DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT	
Calculating the Frequencies of Natural Vibrations and the Amplitudes of Forced Vibrations in Three-Column Centrifuges — V. G. Likuchev	6 5
Cost Evaluation of Various Methods for Regulating Centrifugal Compressor Performance — K. A. Tel'nov and G. N. Den	15 11
Comparison of Properties and Structure of Gray Iron in Castings and Test Pieces (Construction of Iron Parts with Complex Shapes) — V. V. Spasski, A. A. Markov, N. S. Pavlenko, and A. A. Chernyi	20 14
Some Problems in Designing and Proportioning Pumps — A. V. Genningson	23 15
Design and Optimization of Turret and Rotary Injection Molding Machines — É. L. Kalinchev	26 1
NEW MACHINERY AND EQUIPMENT	
An Apparatus of Readily Available Plastic Material for Absorption of Hydrogen Chloride in Water — D. V. Moskvina, N. P. Gorelov, and Yu. P. Kuznetsov	29 19
Aerodynamic Separator for Removing Broken Granules and Crumbs from the Spherical Particles of an Aluminosilicate Catalyst — T. V. Shein, A. N. Khutinaev, Yu. P. Yur'ev, and Zh. D. Ryabokon'	32 20
INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES	
Investigation and Design of Thermochemical Processes Determination of the Velocity Profile in Devices with Stirrers — V. V. Kafarov and I. M. Ogorodnik	35 22
Determination of the Mass-Transfer Area in a Vibrating-Plate Extractor — N. I. Gel'perin, V. L. Pebalk, E. P. Zaikovskaya, V. R. Rasskazov, and N. V. Kiseleva	40 25
Increasing the Filtration Rate of Flocculated Mineral Suspensions — E. P. Tyuftin, V. A. Tolkachev, and V. N. Palagina	43 26
NEW MATERIALS AND CORROSION CONTROL	
Strength and Resistance to Cold of AMg5V Alloy and Its Welded Joints at Low Temperatures — G. A. Stepanov and N. S. Baranov	45 28
Properties of VKSt.3kp Oxygen-Converter Steel — Kh. I. Cheskis and A. N. Bocharov	49 30
Effect of the Thickness of the Glue Film on the Service Life of Glued Metal Joints in Water — É. É. Virlich and A. D. Domashnev	52 32
EQUIPMENT MANUFACTURING TECHNOLOGY	
A Mechanized Method of Expanding Tubes with Automatic Quality Control — A. Ya. Matyash and D. I. Kondrashov	55 34
Modification of Cast Iron with Magnesium Salts — S. Zh. Zhalimbetov, A. N. Buyanov, and P. P. Alifer	59 36

ORGANIZATION AND ECONOMICS OF PRODUCTION

Development of an Optimum Plan for the Prospective Development of the Petrochemical Process Machinery Industry — S. A. Bashirov, V. A. Volkonskii, M. M. Lotkin, Yu. A. Manzon, A. B. Pomanskii, and A. D. Shapiro	61	37
--	----	----

EXCHANGE OF EXPERIENCE

Longer Service Life for Punches Working with Round Piercing Dies — V. Ya. Nepovinnykh	68	41
Fabrication of Shell-and-Tube Heat Exchangers from VT1-1 Alloy — I. F. Kharchenko	69	42
Automatic Control of Compressed Air Pressure in Compressor Stations of Petrochemical Process Machinery Plants — M. A. Babaev and N. I. Rozovskii	70	42
Pickling of Stainless Steel Parts — M. B. Vixel'berg, I. P. Gonibesova, and Ts. G. Maizel'	72	43
Pneumatic Pipe Bending Machine — I. V. Odenko	73	44

INFORMATION

Visual Techniques in X-ray Quality Control of Welded Joints — V. M. Chernyshev, F. S. Kuznetsov, and A. A. Ermakov	74	44
Continuous Splicing of Metal Cord — I. Z. Onatii	79	47

[BIBLIOGRAPHY	48]
---------------------	-------	-----

Number 2

February, 1967

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

How to Calculate the Basic Parameters of a Rotary Vacuum Filter — É. N. Ginzburg, G. A. Roginskii, and A. D. Dmitrievskaya	81	1
Calculating Basic Geometric Parameters of Screw Compressors with Large Screw Twist Angles — I. A. Sakun and Yu. I. Dimentov	86	4
Investigation of Stresses in the Seats of Annular Piston Compressor Valves — Yu. B. Yakovlev	90	6
Calculations on Loaded Tubes Exposed to Corrosion — V. M. Dolinskii	96	9
Investigation of Stresses Imposed by Axial Loads in Insert Drill Bit Legs — Ya. M. Kershenbaum and B. N. Bezhodarnyi	98	10

NEW MACHINERY AND EQUIPMENT

Results of Industrial Tests on the LV-130 Vertical Leaf Filter — V. V. Belynskii and V. N. Melikhov	101	12
Sealed Electric Pump for Mercury with Mercury-Lubricated Bearings — V. F. Fedorov and G. V. Rizhamadze	105	14
Mill for Mechanochemical Synthesis of Polymeric Materials — G. V. Sagalaev, É. Z. Bokareva, and M. S. Akutin	107	16

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

Investigation of the Hydrodynamics and Mass Exchange in Devices with Mobile Packing — I. G. Blyakher, L. Ya. Zhivaikin, and N. A. Yurovskaya	111	18
Effect of the Taper Angle of the Exit Cone on the Hydraulic Resistance and Mass Exchange in Absorbers with Sprayed Venturi Tubes — P. A. Semenov, Yu. V. Tumanov, and Yu. P. Nedoborov	117	22
On the Thermal Processes Taking Place in a Worm Press — M. I. Mishchenko, A. V. Samoilov, and T. I. Ezhova	120	23
How to Use Plastication Kinetics Curves to Calculate Twin-Screw Extruder Parameters — M. B. Dubinskii	124	26
Designing Pneumatic Conveying Systems — A. S. Bezrukov	129	28

NEW MATERIALS AND CORROSION CONTROL

Selection of Chemically Stable and Durable Grades of Polypropylene for Chemical Machine Building — K. A. Moskatov and L. F. Grigor'eva	133	30
Anticorrosive Furfuryl Varnishes for Petroleum Industry Appliances — F. I. Belkind	139	33

EQUIPMENT MANUFACTURING TECHNOLOGY

Spot Welding (Arc and Contact) of Heat-Hardened VT14 Titanium Alloy — D. A. Polyakov and E. F. Guzikov	142	35
Problems in Methods of Lapping Sealing Surfaces — Yu. M. Kotelevskii and L. I. Éksler ..	145	37

ORGANIZATION AND ECONOMICS OF PRODUCTION

<i>Theory and Practice of Planning the Demand of the National Economy for Chemical Equipment</i> — E. G. Chistyakov and Ya. L. Fel'dman	148	38
---	-----	----

EXCHANGE OF EXPERIENCE

Rod Mixture for Iron Casting — G. V. Yanchenko	151	40
Modernization of a High-Pressure Valve — E. A. Sokolovskii	152	40
Modernization of Model 112 Mixing Rolls — E. K. Turut'ko	153	41
Machine for Removing the Burrs from Perforated Sheets — I. M. Naumenko	154	42
Increasing the Capacity of a Gas Compressor	155	42

INFORMATION

Foreign Vibratory Process Equipment — A. D. Lesin	156	43
---	-----	----

[BIBLIOGRAPHY	46]
---------------------	-----

ERRATA	162
--------------	-----

Number 3, March, 1967

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

Basic Improvement Trends in the Design of Fractionator Grid Trays — I. A. Aleksandrov, E. N. Turevskii, N. G. Krzhizhevskaya, and V. I. Sorokin	163	1
Automatically Operated Valve Governs Constant Pressure Drop between Liquid and Gas in Diaphragm Compressor — S. M. Altukhov	167	3
Investigation of Stress Relief in a Compressor Packing Gland — G. F. Kiselev and I. S. Ushakov	172	6
Variant Method in Design of Steam-Water Jet Ejector Refrigerators — M. A. Sil'man	175	7
Optimum Number of Rolling Elements in the Main Bearing of the U6-ShV14-160M Drilling Rig Swivel — Ya. A. Gruzinov	179	10

NEW MACHINERY AND EQUIPMENT

Plate Type Filter Thickener Features Continuous Cake Removal by Vibratory Paddles — N. S. Fortunatov, V. I. Stetsenko, P. I. Vladiko, and G. B. Brusilovskii	183	12
Mechanized Hydraulic-Drive Three Column Centrifuge — É. G. Gerke	185	13

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

Calculation of Ceramic Filters for Low-Concentration Suspensions — G. G. Kotlyarov ...	187	14
Gas Content of Liquids Aerated in Devices with Mixers — R. D. Soifer and V. V. Kafarov .	192	16
Determination of the Vortex Zone Arising in the Mixing of Liquids by Means of Mechanical Mixers — I. N. Karasev and S. Ya. Gzovskii	196	19

Diffusion Resistance in Vapor and Liquid Phases in a Rotary Column — V. R. Ruchinskii, A. V. Shafranovskii, I. P. Slobodyanik, and G. I. Vagner	198	20
The Investigation of the Separation of the Secondary Steam during the Combined Operation of Cyclone and Baffle Separators — A. N. Davidenko, A. M. Kutepov, and A. N. Planovskii	202	22
NEW MATERIALS AND CORROSION CONTROL		
Materials Corrosion Resistant in the Acylating and Hydrolizing Media of Cellulose Acetate Butyrate Production — M. M. Kristal', M. V. Prokof'eva, N. A. Adugina, and V. G. Suslyakova	207	24
Study of Pipe Manifolds Made of Sitall — A. V. Goryainova, I. A. Bikson, V. V. Degtyarev, and V. N. Maragaeva	209	25
EQUIPMENT MANUFACTURING TECHNOLOGY		
Preservative Maintenance of Assembled 4M10-100/8 Compressors — N. I. Reznichenko ..	213	28
Automatic Welding of Clad Sheet Steel St. 3 + 0Kh23N28M3D3T — G. I. Gerasimenko and I. I. Gan	221	32
A New Method for Induction Heating of Vulcanization Molds — N. N. Zalivin	224	33
QUALITY, RELIABILITY, AND LIFETIME		
Method for Estimating the Operating Reliability of Heat-Exchange Equipment (Discussion) — V. M. Chernyshev, V. T. Kurokhtin, A. A. Bashlykov, and L. P. Rysina	226	35
ORGANIZATION AND ECONOMICS OF PRODUCTION		
Grid Graph Planning and Control Method Applied to Equipment Maintenance in the Chemical Industry — E. K. Sashina, É. I. Shklovskii, A. B. Miller, and Yu. S. Chentsov ...	231	37
Engineering Maintenance—One of the Chief Resources for Improving Reliability and Service Life of Drilling Gear (Contribution to the Discussion)—S. G. Babaev and I. A. Danielyan	235	40
EXCHANGE OF EXPERIENCE		
Machine Tool Line for the Fabrication of Capsule Type Bubble Caps in Tower Equipment — V. T. Usik	238	41
Cadmium Plating in Fluoboric Acid Electrolyte — I. P. Gonibesova and M. B. Visel'berg	240	42
Fabrication of Outsize Internally Toothed Rings — Yu. I. Checherin	241	43
INFORMATION		
Science and Engineering Council of the Ministry of the Chemical and Petrochemical Process Machinery Industry — V. I. Rublev	243	44
All-Union Conference on Efficient Utilization of Plastics in the National Economy — A. M. Gleikh	248	46
[BIBLIOGRAPHY		

Number 4 April, 1967

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

The Reduction of the Coefficient of Rigidity of Heat Exchanger Tube Plates during Elastoplastic Strain — V. M. Dolinskii and B. S. Koval'skii	253	1
Strength and Rigidity Calculations for Oval Slide Valve Bonnets — E. G. Isarov	256	3
Spiral-Wound Heat Exchangers Designed with no Tube Spacers — M. B. Stolper	259	4
Flow Area Characteristics of Circulating Centrifugal Compressors — V. B. Shnepp and S. S. Evgen'ev	263	6
Basing the Packing Gland of a High Pressure Pump — G. F. Kiselev and I. S. Ushakov ...	268	9

NEW MACHINERY AND EQUIPMENT

- Results of Tests and Adjustments on the New 4M10-10018 Air Compressor — Yu. A. Vasenin, A. G. Kats, and I. D. Kramer 271 11

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

- Designing a Drum Vacuum Filter for Dewatering Highly Compressible Effluent Sediments — M. Kh. Kuchinskii 275 13
- Production-Oriented Design of NOGSh Type High-Speed Sedimentation Helical-Conveyor Centrifuge — A. A. Nesterovich, N. I. Gel'perin, and D. E. Shkoropad 279 15
- Investigation of Gas Distributors in Granular Packed-Bed Equipment — N. M. Tikhonova .. 283 18
- Investigation of the Heat-Transfer Process in the Space between Pipes in Heat-Exchanger Columns — M. É. Aérov, T. A. Bystrova, K. P. Berezhnaya, and A. P. Darovskikh . 286 20
- Heat Exchange under Free Convection and Boiling in a Large Volume of PFMS-2 Vacuum Oil at Low Pressures — M. M. Sorokin and A. V. Chechetkin 289 21

NEW MATERIALS AND CORROSION CONTROL

- Investigation of the Strengthening of Steels St. 3 and Kh17N13M2T in the Process of Straightening — V. M. Chernyshev, F. S. Kuznetsov, and F. Ya. Dubkov 294 24
- Corrosion Cracking in Kh18N10T Steel Cooler Used in Production of Sulfuric Acid — A. N. Kuzyukov, É. K. Malakhova, and V. A. Borisenko 299 27

EQUIPMENT MANUFACTURING TECHNOLOGY

- Hardening Large Crankshafts in Opposed-Piston Compressors — V. K. Udalov 301 28
- Fabrication of Glass Fiber Reinforced Fans — M. I. Mishchenko and A. M. Parkhomenko .. 304 30
- Enamel Coatability of Decarburized Iron — A. A. Zaitsev and V. S. Mogil'chenko 307 31

STANDARDIZATION

- Plant-Wide Standardization of Continuous-Belt Vacuum Filters — A. G. Solodkii 310 33

ORGANIZATION AND ECONOMICS OF PRODUCTION

- Production Management Experience at the Uralkhimmash Plant — L. K. Shchupak 312 34

EXCHANGE OF EXPERIENCE

- Mechanized Welding of Internal Seams in Vessels and Shells — A. I. Remesnikov 322 39
- New Perforating Dies — N. P. Galyan 324 40
- Experience of the Petrov (Volgograd) Factory in Cutting Down Electric Power Costs — M. N. Nikolaev 325 41

INFORMATION

- Experimental Means for Determining Pressure, Axial Thrust, and Temperature in Granulators — R. Ya. Sutin, V. N. Orlov, A. T. Yurchenko, and V. A. Smirnov 326 41
- New Ceramic-Lined Process Equipment — A. I. Prikhod'ko 328 43
- Design Development Trends in Foreign Extruders — V. S. Kim 330 43

[BIBLIOGRAPHY]

Number 5

May, 1967

NEW MACHINERY AND EQUIPMENT

- Packless Pressuretight Centrifuge Features Built-in Electric Motor with Shielded Rotor — Yu. I. Sharetskii, V. V. Shperer, V. P. Kulik, and Yu. A. Perevertailenko 337 1
- Horizontal Electrodehydrators for Built-in Electric Desalting Plants — Ya. I. Pinkovskii. 341 3

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

Investigation of Automatic Blowdown System for Interstage Equipment of Large Gas Compressors — M. A. Gurevich and A. F. Filippov	344	5
The Distribution of Load between the Satellites of a Planetary Drive — I. V. Sigov and O. L. Zaporozhets	349	7
Behavior of Cylindrical Flat-Bottom Vessels under Plastic Strain — G. G. Popov	354	10

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

The Testing of an Evaporator with Gravity Circulation and External Boiling Zone — E. M. Kovalev and V. S. Fokin	359	13
The Experimental Investigation of Hydraulic Cyclones in Processing High-Dispersion Suspension — A. N. Izmailova	363	15
Simplified Determination of the Circulation Rate of a Liquid Boiling in a Closed Circuit — G. Kh. Gatiatullin and S. N. Shorin	368	18
Investigation of Convective Heat Exchange on the End-Face Surfaces of Unit-Type Graphite Heat Exchangers — V. S. Novopavlovskii	374	22

NEW MATERIALS AND CORROSION CONTROL

Corrosion Behavior of Chrome-Nickel-Molybdenum-Copper Steels in Sulfuric and Phosphoric Extraction Acids — Yu. S. Sidorkina and R. F. Dal'nikovich	379	25
Relieving Stresses in Welded Joints of Austenitic Steel — M. B. Shapiro and L. V. Zlotnitskaya	382	27

EQUIPMENT MANUFACTURING TECHNOLOGY

Submerged-Arc Welding at Plants Producing Equipment for the Petroleum Industry — S. A. Zandberg and L. M. Bronshtein	386	29
Glass Fiber Reinforced Plastic AG-4 Pumps for Handling Corrosive Streams — S. N. Makeev, M. A. Grinberg, Yu. I. Perin, R. A. Valieva, M. S. Trebukina, and L. K. Burmistrova	392	34
Diamond Abrasive Grinding of Pump Pistons: Costs and Conditions for Finish Cuts — B. B. Trinchuk and D. E. Anel'chik	396	36

ORGANIZATION AND ECONOMICS OF PRODUCTION

Specialized Manufacturing Techniques in Valve Equipment Manufacture (Contribution to the Discussion) — V. A. Trusov	399	38
---	-----	----

EXCHANGE OF EXPERIENCE

Mechanical and Technological Variables Affecting Stable Operation of Shaper-Vulcanizers — M. V. Zhurbin and O. É. Nadzharov	402	39
Experience in Adjusting Automatic Control System for Bowl Nip of a Three-Bowl Calender — L. B. Nikitina and D. S. Kosoi	406	41
Gamma-Ray Weld Monitor Features Remote-Control Emergency Drive — P. G. Serov and L. P. Kartashov	410	43
Washer Stamping Die With Combined Guideposts — N. M. Stepanov-Grebennikov	412	44
Throttling Stop Valve Designed to Take 1800 ATM Pressure — V. V. Osipov, A. V. Simonov, and I. I. Malyshev	413	45

INFORMATION

Experimental Reactor for Tartaric Acid Fabricated with AT-3 Titanium Alloy — E. K. Kovshikov and T. P. Kimina	415	46
Improvements in the Fabrication Technology and Quality Control of Vessel Closures — B. N. Shevelkin	416	46
Coordination Conference on Standardization at Plant Level and Industry Level in the Polymer Processing Machinery Industry — G. É. Lyubarskii	419	48

Number 6 June, 1967

NEW MACHINERY AND EQUIPMENT

Mixer with Pressurized Power Drive—B. R. Borisov, G. D. Seleznev, and V. N. Suntsov	421	1
A New Fluid-Energy Mill—V. I. Akunov	424	3

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

Automation of Reciprocating Compressors—B. V. Kolosovskii	428	5
Bolt Selection in Flanged Unions (in the Course of Discussion)—A. A. Lashelskii	431	7
Buckling Calculations of Conical Shells; Axial Compression and Bending—V. I. Kulakov	435	9
Investigation of Bond Strength of Shells in Cone-Bottomed Evaporators—E. G. Karchevskii	439	11

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

Increase of the Velocity of the Secondary Steam in the Evaporator Separator and Selection of the Best Trap Design—E. M. Kovalev	442	12
Design of Gas-Liquid Injectors and Ejectors—A. B. Cheskis	447	15
Regularities in the Separation of Binary Mixtures of Granular Materials during Fluidization in a Centrifugal Force Field—N. I. Gel'perin, V. G. Ainshtein, and G. A. Nosov	451	18
Some Characteristics of Equipment with Precessing Motion of the Stirrer—I. I. Bortnikov, N. I. Taganov, I. S. Pavlushenko, A. I. Mil'chenko, and M. F. Mikhalev	456	21
Investigation of the Performance of Inclined-Paddle Radial Paddle Mixers Mixing Newtonian Fluids—I. M. Muslaev, S. Ya. Gzovskii, and I. N. Karasev	460	23

NEW MATERIALS AND CORROSION CONTROL

Study of the Corrosion Resistance of Metals in the Media of Phenol Synthesis from Toluene—Yu. I. Perin, R. A. Valieva, and A. A. Sokolov	463	25
New Materials for Piston Rings for High-Pressure Compressors—A. Ya. Artamonov, A. A. Dan'kin, and V. V. Spasskii	465	26
Effect of Residual Stresses on Durability Properties of Hydrogen-Charged Steel—A. P. Korchagin and A. D. Domashnev	469	28

EQUIPMENT MANUFACTURING TECHNOLOGY

Mechanized Welding of Duplex Steel Thick-Walled Vessels—I. I. Kumysh, V. A. Lutsyuk-Khudin, V. Ya. Saenko, and G. G. Andrianov	472	29
Fabrication of Titanium Heat-Exchange Equipment—V. A. Besednyi, G. M. Shelenkov, and A. Ya. Vasilega	477	32
Fabrication of Shell-and-Tube Heat Exchangers with Dissimilar Metals—K. V. Smol'skii	482	35
Machinability of New Types of Low-Nickel Stainless Steels—Yu. G. Stolyarov and I. P. Smirnov	486	37
Centrifugal Casting of Drill Bit Cones—S. G. Sultanov, T. G. Geokchaev, and L. P. Kolienko	489	38

ORGANIZATION AND ECONOMICS OF PRODUCTION

Contribution to Optimized Planning of Drill Bit Factory Production Programs (Contribution to a Discussion)—M. M. Melikov, Yu. A. Manzon, P. A. Gyandzhuntsev, and O. A. Trifonov	493	41
Widespread Adoption of Scientific Organization of Labor is the Key to Highly Productive Operations—N. M. Plekhov	496	42

EXCHANGE OF EXPERIENCE

Characteristics of Various Methods for Control of Reciprocating Compressors—Yu. V. Kuznetsov and S. L. Magrachev	499	43
Induction Heater for Normalizing Longitudinal Weld Seams in Vessel Shells—N. M. Kabanov and S. A. Zandberg	501	44

ADSV-2 Automatic Consumable-Electrode Welder Operates in Carbon Dioxide Atmosphere— F. Sh. Sharifyanov	505	47
---	-----	----

INFORMATION

Pressure Sensors for Plastic Melts—A. S. Zorin and V. N. Konstantinov	506	48
Wear Test Stand for Valve Materials—Yu. F. Malyshkin, E. I. Vorob'ev, and V. M. Boichenko	508	48
Raising the Technical Level of Soviet Grinding and Mixing Practice—M. L. Morgulis	510	49

Number 7 July, 1967

DEVELOPMENT OF PUMP MANUFACTURING IN THE USSR

Pump Manufacturing and Its Future—N. K. Pereverzin	513	1
Vaned Chemical Process Pumps—V. B. Shemel'	517	3
New Pumps for Handling Slurries with Solids—A. M. Litvinenko, E. I. Kozhevnikova, and V. N. Vasil'ev	526	8
Centrifugal Single-Stage Pumps and Vortex Pumps—A. E. Karavaev, V. S. Kukushkina, and V. V. Shaumyan	535	13
Volumetric Pumps for the Chemical, Petrochemical, and Other Branches of Industry—V. L. Kalishevskii, V. K. Kantovskii, Ya. L. Lyubin, and I. N. Smirnov	540	17
Pumps for Heat Energy Installations—Yu. I. Sinenko	547	21
Advanced Production Methods in Pump Industry Plants—D. G. Beletskii	554	25
Kotovskii Pump Factory in Kishinev—A. I. Bolgar' and E. V. Silin	562	30
Ya. M. Sverdlov Hydraulic Machinery Factory in the Urals—B. A. Vakhrameev	567	32

DEVELOPMENT OF INDUSTRIAL VALVE PRODUCTION

Development of Valve Fabrication and Design in the USSR—M. V. Dmoshinskii and K. N. Burtsev	571	35
Pathways of Development of Piping Valve Design—N. S. Lur'e	577	37
New Developments in Oil Refinery and Tank Valves—G. V. Mamontov	582	40
Machinery Fabrication Technology Developments at Valve-Manufacturing Plants—P. F. Perov	585	42
V. I. Lenin Georgievskoe Order of the Labor Red Banner Valve Factory—N. F. Baidalin	588	44
Tyazhpromarmatura Valve Factory in Penza—V. M. Titor and M. A. Nevryuzin	592	45

Number 8 August, 1967

DEVELOPMENT OF COMPRESSOR CONSTRUCTION IN THE USSR

Development of Large-Capacity Reciprocating Compressors — T. F. Kondrat'eva and M. I. Frenkel'	597	1
General Purpose Piston Compressors — V. A. Rumyantsev	603	5
Developments in Turbocompressor Construction at the V.I. Lenin Neva Engineering Plant — V. F. Ris	608	8
Diaphragm Compressors — S. M. Altukhov	619	14
Automation Systems for Piston Compressors — A. D. Kryuchkov	624	17
Order of Lenin and Order of Labor Red Banner Moscow Compressor Factory, "Borets" — V. A. Get'e and A. A. Belen'kii	628	19
Melitopol' Compressor Factory — I. A. Kovalenko and I. V. Shpit	632	22
Penza Compressor Factory — I. L. Kurbatskii	637	24
High-Output Production Equipment Used by the Compressor and Refrigerator Manufacturers — I. M. Yaroslavskii	640	26

SOVIET COOLING-MACHINERY CONSTRUCTION

Cooling Equipment for the Chemical, Petrochemical, and Oil Refining Industry — R. V.

Pavlov	646	30
Development of Designs for Reciprocating Refrigerator-Compressors — E. S. Gurevich .	652	34
New Compressor Designs for Cooling Machines — A. V. Vykov and I. M. Kalnin'	659	38
Automation of Refrigeration Equipment — V. S. Shcherbakov	667	43
Order of the Red Banner of Labor Moscow "Kompressor" Refrigeration-Equipment Factory — M. É. Kats and M. G. Shumelishskii	671	46
A Communication from the Editorial Board	677	49

Number 9

September, 1967

Petroleum Engineering in Fifty Years—Ya. M. Kershenbaum and G. N. Berzhets	679	1
Petroleum Engineering Industry in Azerbaijan Fifty Years after the Great October Revolution—A. B. Asadullaev	684	4

DEVELOPMENT OF OILFIELD EQUIPMENT

Modern Drilling Rigs—V. I. Roshchupkin and A. A. Antonov	688	6
Subsurface Pumping Equipment—K. S. Aliverdizade, Yu. I. Shevchuk, A. M. Rabinovich, and I. K. Karaev	691	8
Equipment for Operation of Flowing Wells—K. S. Aliverdizade, R. A. Ramazanov, N. M. Maidel'man, and Kh. T. Kakhramanov	696	10
Equipment for Increasing Production—A. A. Danielyan, É. S. Ibragimov, V. G. Gorbov, and V. F. Seryakov	701	13
Cementing Equipment for Oil and Gas Wells—É. S. Ibragimov, A. A. Danielyan, N. G. Kurbanov, and D. K. Melikov	705	15
Well-Workover Equipment—F. D. Lemberanskii, A. A. Danielyan, M. N. Velikhanov, M. A. Abramov, A. D. Dzhaferov, and V. G. Tarayants	710	18
Lt. Schmidt Order-of-Lenin Engineering Factory—G. N. Seidov	714	21

DEVELOPMENT OF PETROLEUM-REFINERY EQUIPMENT

Equipment Design of Petroleum Refineries and Petrochemical Plants—B. Z. Abrosimov, Yu. L. Vikhman, and S. M. Mel'nikov	717	23
Air-Cooled Equipment for the Petroleum Refinery, Petrochemical, and Chemical Industries—B. Z. Abrosimov, Yu. L. Vikhman, and V. M. Shmerkovich	723	27
New Fractionating Column Constructions—V. A. Sheinman, N. A. Aleksandrov, and V. S. Svezhentsev	728	30
Tube Furnaces for the Petroleum, Gas, and Chemical Industries—Ts. A. Bakhshiyani	736	35
Petrov Volgograd Petroleum Machinery Plant—Yu. I. Lomakin	742	39
Chernovitsy Machine-Building Factory—A. I. Negadailov, L. Z. Tkachenko, and B. R. Breslavets	748	43

ORGANIZATION AND ECONOMICS OF PRODUCTION

Complex Specialization with a Cluster of Petroleum-Engineering Factories —P. G. Manilovskii and Yu. A. Manzon	753	46
--	-----	----

Number 10

October, 1967

Technical Level and Trends of Development of Evaporating Equipment—E. M. Kovalev, L. P. Pertzev, and V. I. Chirva	777	14
Column Equipment—F. N. Shakhov, V. I. Shporkhun, A. B. Tyutyunnikov, and A. N. Marchenko	780	17
Development of Drying Methods in the Chemical Industry—A. K. Koryagin	784	20
Development of the Manufacture of Enameled Equipment for the Chemical Industry —Z. I. Simkhovich, K. L. Tsantker, and S. I. Ivakhin	787	23
Development of the Manufacture of Ceramic Equipment—K. L. Tsantker, Ya. M. Minskii, and S. I. Ivakhin	791	26
The Moscow Institute of Chemical Engineering—an Institute with Great Prospects —D. T. Kokorev and É. F. Shurgal'skii	794	28
Extending the Range of Metals Used in the Chemical Engineering Industry —A. L. Belinkii, Yu. M. Vinogradov, M. M. Kristal', M. B. Shapiro, and G. L. Shvarts	799	32
The Ural Chemical Engineering Factory—V. M. Makarov and N. K. Globin	805	36
Penza Chemical Engineering Factory—I. I. Burlakov	812	43

Number 11 November, 1967

Development of Scientific Research and Design Work in the Field of Chemical Equipment Construction—V. B. Nikolaev	819	1
Foreign Economic Relations in Chemical and Petroleum Engineering—G. O. Terzyan	826	7
Development of Filter Construction—B. N. Borisoglebskii	829	9
Centrifuge Design Developments—D. E. Shkoropad	839	15
Achievements of the Soviet Scientific School in Centrifugation Engineering—V. I. Sokolov	848	20
Growth and Scientific-Engineering Activity of the Leningrad Research Institute of Chemical Equipment (LenNIIkhimmash)—N. N. Loginov	855	24
UkrNIPlastmash Plastics Machinery Research Institute Research and Development Program—P. P. Prihodchenko	859	26
Worm and Roller Machines for Processing Plastics—M. I. Mishchenko	862	28
Equipment for Production of Oriented Films—I. M. Koretskii, G. S. Vainshtein, V. N. Konstantinov, and S. I. Gdalin	867	31
Some Types of Equipment for Manufacturing Fiber-Glass Parts—A. V. Oleinik	873	34
Training of Mechanical Engineers for Plastics and Polymer Industry	877	36
The Sumy M. V. Frunze Order of Lenin Machine Building Factory—V. A. Reznichenko and V. D. Vasil'ev	878	37
The Berdichev "Progress" Chemical Engineering Factory—E. M. Mel'nikov and G. I. Smirnov	884	40
The Uzbek Chemical Engineering Factory—N. M. Platonov, L. A. Skalyga, and L. M. Smirnov	889	43
The Fastov "Red October" Chemical Engineering Factory—A. E. Landa	892	45
Second Five-Year Plan Experimental Plant for Paper-Making Machines—A. P. Tyutyunik	895	47

Number 12 December, 1967

DEVELOPMENT OF SOVIET OXYGEN EQUIPMENT CONSTRUCTION		
Process Oxygen and Nitrogen Plants—I. S. Guzman	899	1
Analysis of Basic Flowsheets for Scaled-up Tonnage Oxygen and Pure Nitrogen Plants —G. B. Narinskii	903	4
Piston Pumps for Low-Temperature Compressed Gases—Yu. A. Miroslovskaya	911	8
Vessels for the Storage and Transport of Liquid Oxygen and Nitrogen —M. G. Kaganer, Yu. V. Ustinovich, V. I. Kozheurov, and Zh. L. Levina	918	12

DESIGN AND CONSTRUCTION OF MACHINERY AND EQUIPMENT

Design of Compact Flanges for Vessels and Other Equipment - R. Z. Rakhmilevich and S. I. Zusmanovskaya.	923	16
Investigation of Stresses in Preventer Housings - V. A. Markaryan.	930	19
Circulation of High-Temperature Heat Carriers by Plunger Pumps with Cold Liquid Pistons - V. B. Kvasha, Yu. A. Golelov, V. P. Gorbokonev, G. I. Trunov, V. V. Golubev, and D. D. Sergienko.	934	21

INVESTIGATION AND CALCULATION OF THERMOCHEMICAL PROCESSES

Head and Throughput of Turbine Stirrers - N. I. Gel'perin, V. L. Pebalk, and V. M. Mishev.	937	23
The Investigation of Heat Transfer and Hydraulic Resistance in Lengthwise-Finned Surfaces - V. V. Gutarev, V. A. Kirpikov, and L. S. Oganessian.	943	27
Investigation of the Heat Exchange in Solutions Boiling in a Vertical Tube under Forced Motion Conditions - L. A. Leont'eva and V. Ya. Gal'tsov.	947	29

EQUIPMENT MANUFACTURING TECHNOLOGY

Manufacture of Self-Acting Valves for Piston Compressors at the Venibe Factory - V. A. Makarenkov, A. M. Yaroslavskii, T. F. Kondrat'eva, M. I. Frenkel', G. V. Gubarev, V. K. Kishkis, and B. A. Spektor.	951	31
Technique for Rolling High-Precision Heat-Exchanger Shells - Yu. I. Berliner and E. A. Kulikov.	953	33
Method of Assembly Using Plastics for Fixed Compensators - I. M. Kremenetskii.	958	35

EXCHANGE OF EXPERIENCE

Use of Laminated-Bakelite Piston Rings for Compressors with Oilless Cylinders - A. S. Dzhaferov.	963	38
Tapping of Stainless Steel Parts with Special Taps - A. Z. Volynchik and A. I. Filippov.	967	40

INFORMATION

Advanced Technology in the Manufacture of Chemical and Petrochemical Process Equipment - Yu. V. Shukhov, D. T. Loganov, and E. V. Naikrug.	970	41
For the First Time in Moldavia - G. L. Fel'dshtein and S. G. Balter.	972	42
Experience of Improving the Technical Standard of Innovators at the Odessa Avtogenmash Factory - V. I. Dolgii and S. M. Vainshtein.	973	43
Foremost People in Production - S. P. Musatkin.	975	44

INDEX

Author Index, Numbers 1-12, 1967.	979
Table of Contents, Numbers 1-12, 1967.	983



